

DREXEL ANALYSIS SEMINAR

May 19, 2017

12-12:50 PM, Korman 245

Speaker: Georgi Medvedev (Drexel)

Title: The Mean Field Limit of the Kuramoto Model on Random Graphs

Abstract: Mathematical analysis of many interesting dynamical effects in systems of coupled oscillators relies on the mean field equation formally derived in the limit, as the number of oscillators goes to infinity. Examples include the onset of synchronization in the Kuramoto model with distributed intrinsic frequencies and emergence and bifurcations of chimera states. In this talk, we discuss the derivation and rigorous justification of the mean field limit for the Kuramoto model on convergent families of certain deterministic and random graphs.